

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

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Etiology of Granuloma Inguinale.—This lesion, because of its occurrence in the region of the groin and external genitalia, has often been referred to as a venereal granuloma, though recent studies deny this origin. It is endemic in certain tropical and subtropical countries, and is occasionally found in temperate regions. WALKER (*Jour. Med. Res.*, 1918, xxxvii, 427) had an opportunity of studying a number of cases in Brazil. Specimens were obtained for histopathological analysis, and a bacteriological study was also carried out. From the open ulcers a variety of microorganisms could be demonstrated. In the Giemsa smears, spirochetes of different kinds were commonly present. Interesting cell inclusions were observed in the large mononuclear cells. These cell inclusions varied, some of them appearing like vacuoles while others had the character of stained rods. The author believed that the variety of cell inclusions was the result of disintegrative changes of ingested cells and debris. However, some of the materials bore a close resemblance to the intracellular organisms described by Donovan. This type appeared to be encapsulated and the organism varied from oval bodies to distinct rods. The author was able to isolate from a number of cases an organism having the morphological and cultural characters of the bacillus mucosus capsulatus. A number of animal experiments carried out with organisms belonging to this capsulated group of bacteria gave rise to lesions resembling those spontaneously developing in man. It is suggested that the infection in man is gained through abrasions or develops as a secondary infection with other lesions.

Experimental Perforating Wounds of Abdominal Viscera.—The experience gained in previous wars and in civil surgery has demonstrated the vital necessity of early operation in wounds of abdominal viscera. DRUMMOND and FRASER (*Jour. Path. and Bact.*, 1917, xxi, 457) have sought to learn some of the principles underlying the repair of perforating wounds of the abdominal alimentary canal by producing in hares, cats and dogs wounds similar to those caused by bullets. They have been able to corroborate surgical experience of the protective action of the omentum and of plastic peritonitis between the coils of bowel. They found that, following these sudden scissor wounds, the omentum, being perhaps parietic, was not attracted to the injured point, and they put forth the hypothesis that this positive chemiotaxis occurs only when the bowel has been bruised and not perforated, without offering experimental evidence for such migration of omentum in these animals. When the omentum was attached to the wound at operation, vascular anastomosis between it and the gut wall occurred in seven days, except

that when the duodenum and upper jejunum were perforated, omental grafts were of little value. Another protective feature was the plugging action of a small sacculation of the mucous coat through the wall at the site of the puncture. The authors found that single, and occasionally multiple, small wounds of the stomach and bowel may recover and that wounds of the ileum show a greater tendency to spontaneous cure than those of any other part of the intestinal tract.

A Contribution to the Serological Classification of the Bile-soluble Diplococci.—It is somewhat remarkable that a group of streptococci shares with certain protozoa such as trypanosomes, spirochetes and amebæ, the property of readily undergoing complete solution in the presence of bile or bile salts. So far as is known no other bacterial species shows this peculiarity. Other very definite biochemical features mark sharply this group from the other streptococci, and yet in spite of this considerable confusion at present exists in regard to their differentiation. All bacteriologists agree they are pneumococci, but there is no agreement that all pneumococci are bile-soluble and show the other characters attributed to them. Until recently all the bile-soluble diplococci were regarded as belonging to one species, of which the approved name appears to be *Streptococcus lanceolatus*, Gamaléia (1888). Evidence is now accumulating to show that it is necessary to divide the groups into two or more species. MAIR (*Jour. Path. and Bact.*, 1917, xxi, 305) regards the causal infective microbe in scarlet fever as a distinct member of the group. To avoid confusion with Klein's *Streptococcus scarlatinæ* he offers the name of *Diplococcus scarlatinæ*. The only certain criteria at present available for the distinction of the different species and groups of bile-soluble diplococci are serological. Investigating the etiology of scarlet fever, Mair showed that a bile-soluble diplococcus of a special serological type occurs with great constancy in the throats of scarlet fever patients. This diplococcus on subcutaneous injection into monkeys produces a condition which in several respects resembles a scarlet fever in the human subject. In attempting to differentiate the scarlatinal diplococcus by complement-fixation methods from certain closely related bile-soluble diplococci, which occur with considerable frequency in apparently normal throats, difficulties were met with, and for this reason sera prepared from the rabbit and a precipitin reaction was employed. By means of this test four scarlatinal strains were isolated. Of 100 cases it was found that in about 90 per cent. of scarlet fever cases the *Diplococcus scarlatinæ* could be isolated in the first week, and by a set of control tests—normal throats—it was discovered that the frequency of the occurrence of scarlatinal carriers is of the same order as that of diphtheria carriers, and is possibly somewhere near 2 per cent. of the general population. More general application of the method here used may show the relationship of these various strains to one another, and so give more information as to their pathogenic action in the various diseases with which they may be associated.

Formation of Bone in Calcified Epithelioma of the Skin, with Some Remarks on Metaplasia.—NICHOLSON (*Jour. Path. and Bact.*, 1917, xxi, 287) reports a case of neoplasm of the skin which had undergone ossi-